DATA ANALYSIS

SQL – Based Data analysis of PIZZA sales

DATA ANALYSIS

INTRODUCTION

As a dedicated Data Analyst with one year of professional experience, I have developed a strong foundation in data collection, analysis, and visualization, enabling data-driven decision-making. I possess hands-on expertise in SQL, Excel, and data visualization tools like Tableau and Power BI. My work involves transforming raw data into actionable insights, identifying trends, and creating detailed reports to support business strategies. With experience in interpreting complex datasets and optimizing workflows, I am committed to improving business outcomes through precise and meaningful analysis.

DATA ANALYSIS

AGENDA

01 Database Schema Design

02 Sales Analysis

03 Peak Hour and Day Analysis

04 Dynamic Pricing Model

RETRIEVE THE TOTAL NUMBER OF ORDERS PLACED

```sql
SELECT
    COUNT(order_id) AS total_orders
FROM
    pizzahut.orders;
```

Result Grid

	total_orders
▶	21350

CALCULATE THE TOTAL REVENUE GENERATED FROM PIZZA SALES

```sql
SELECT
    ROUND(SUM(o.quantity * p.price), 2) AS total_revenve
FROM
    order_details AS o
        JOIN
    pizzas AS p ON o.pizza_id = p.pizza_id
```

Result Grid

total_revenve
817860.05

IDENTIFY THE HIGHEST-PRICED PIZZA

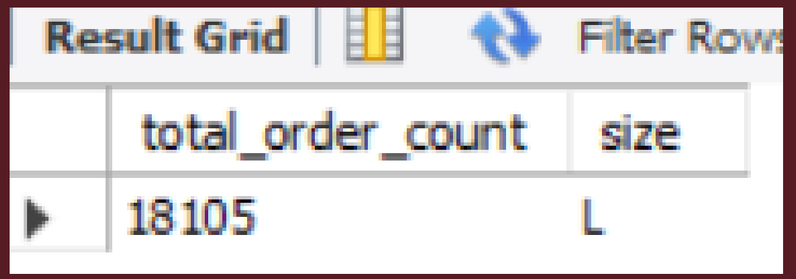
```sql
SELECT
    pt.name, p.price
FROM
    pizza_types AS pt
        JOIN
    pizzas AS p ON pt.pizza_type_id = p.pizza_type_id
ORDER BY p.price DESC
LIMIT 1;
```

Result Grid | Filter Ro

	name	price
▶	The Greek Pizza	35.95

IDENTIFY THE MOST COMMON PIZZA SIZE ORDERED

```sql
SELECT
    COUNT(o.quantity) AS total_order_count, p.size
FROM
    order_details AS o
        JOIN
    pizzas AS p ON o.pizza_id = p.pizza_id
GROUP BY o.quantity , p.size
ORDER BY total_order_count DESC
LIMIT 1
```



DATA ANALYSIS

LIST THE TOP 5 MOST ORDERED PIZZA TYPES ALONG WITH THEIR QUANTITIES

```sql
SELECT
    pt.name, SUM(o.quantity) AS total_quantity
FROM
    pizza_types AS pt
        JOIN
    pizzas AS p ON pt.pizza_type_id = p.pizza_type_id
        JOIN
    order_details AS o ON o.pizza_id = p.pizza_id
GROUP BY pt.name
ORDER BY total_quantity DESC
LIMIT 5
```

name	total_quantity
The Classic Deluxe Pizza	2453
The Barbecue Chicken Pizza	2432
The Hawaiian Pizza	2422
The Pepperoni Pizza	2418
The Thai Chicken Pizza	2371

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JOIN THE NECESSARY TABLES TO FIND THE TOTAL QUANTITY OF EACH PIZZA CATEGORY ORDERED

```sql
SELECT
    pt.category, SUM(o.quantity) AS total_quantity
FROM
    pizza_types AS pt
        JOIN
    pizzas AS p ON pt.pizza_type_id = p.pizza_type_id
        JOIN
    order_details AS o ON o.pizza_id = p.pizza_id
GROUP BY pt.category
ORDER BY total_quantity DESC
```

category	total_quantity
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050

DETERMINE THE DISTRIBUTION OF ORDERS BY HOUR OF THE DAY

```sql
SELECT
    HOUR(order_time) AS hour, COUNT(order_id)
FROM
    orders
GROUP BY HOUR(order_time);
```

hour	COUNT(order_id)
19	2009
20	1642
21	1198
22	663
23	28
10	8
9	1

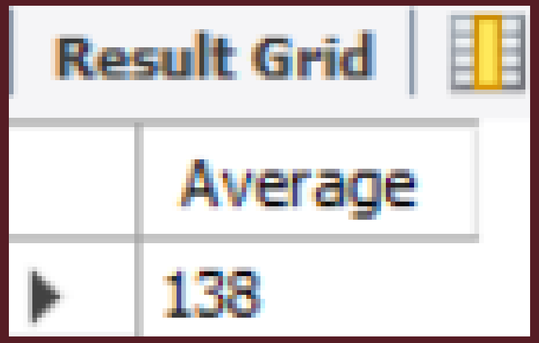
JOIN RELEVANT TABLES TO FIND THE CATEGORY-WISE DISTRIBUTION OF PIZZAS

```
SELECT
    category, COUNT(name) AS no_of_pizzas
FROM
    pizza_types
GROUP BY category
```

category	no_of_pizzas
Chicken	6
Classic	8
Supreme	9
Veggie	9

GROUP THE ORDERS BY DATE AND CALCULATE THE AVERAGE NUMBER OF PIZZAS ORDERED PER DAY

```sql
SELECT
    ROUND(AVG(quantity), 0) AS Average
FROM
    (SELECT
        o.order_date, SUM(od.quantity) AS quantity
    FROM
        orders AS o
    JOIN order_details AS od ON o.order_id = od.order_id
    GROUP BY o.order_date) AS order_quantity
```



DETERMINE THE TOP 3 MOST ORDERED PIZZA TYPES BASED ON REVENUE

```sql
SELECT
    pt.name, SUM(p.price * od.quantity) AS revenue
FROM
    pizza_types AS pt
        JOIN
    pizzas AS p ON pt.pizza_type_id = p.pizza_type_id
        JOIN
    order_details AS od ON od.pizza_id = p.pizza_id
GROUP BY pt.name
ORDER BY revenue DESC
LIMIT 3
```

name	revenue
The Thai Chicken Pizza	43434.25
The Barbecue Chicken Pizza	42768
The California Chicken Pizza	41409.5

CALCULATE THE PERCENTAGE CONTRIBUTION OF EACH PIZZA TYPE TO TOTAL REVENUE

```sql
SELECT
    pt.category,
    ROUND((SUM(od.quantity * p.price) / (SELECT
                    SUM(p.price * od.quantity)
                FROM
                    pizzas AS p
                        JOIN
                    order_details AS od ON p.pizza_id = od.pizza_id) * 100),
            2) AS percentage
FROM
    pizza_types AS pt
        JOIN
    pizzas AS p ON pt.pizza_type_id = p.pizza_type_id
        JOIN
    order_details AS od ON od.pizza_id = p.pizza_id
GROUP BY pt.category
```

category	percentage
Classic	26.91
Veggie	23.68
Supreme	25.46
Chicken	23.96

ANALYZE THE CUMULATIVE REVENUE GENERATED OVER TIME

```sql
SELECT
      date,
      ROUND(SUM(total_revenue) OVER(ORDER BY date), 2) AS cumulative_revenue
FROM (SELECT
    SUM(p.price * od.quantity) AS total_revenue,
    o.order_date AS date
FROM
    pizzas AS p
        JOIN
    order_details AS od ON p.pizza_id = od.pizza_id
        JOIN
    orders AS o ON o.order_id = od.order_id
GROUP BY o.order_date) AS sales
```

date	cumulative_revenue
2015-01-01	2713.85
2015-01-02	5445.75
2015-01-03	8108.15
2015-01-04	9863.6
2015-01-05	11929.55
2015-01-06	14358.5
2015-01-07	16560.7
2015-01-08	19399.05
2015-01-09	21526.4

DETERMINE THE TOP 3 MOST ORDERED PIZZA TYPES BASED ON REVENUE FOR EACH PIZZA CATEGORY

```sql
SELECT category, name, ROUND(revenue, 2) AS revenue
FROM (SELECT category, name, revenue,
      RANK() OVER(PARTITION BY category ORDER BY revenue DESC) AS rn
FROM
(SELECT
    pt.category, pt.name, SUM(p.price * od.quantity) AS revenue
FROM
    pizza_types AS pt
        JOIN
    pizzas AS p ON pt.pizza_type_id = p.pizza_type_id
        JOIN
    order_details AS od ON od.pizza_id = p.pizza_id
GROUP BY pt.category , pt.name) AS x) AS x1
WHERE rn <= 3
```

category	name	revenue
Chicken	The Thai Chicken Pizza	43434.25
Chicken	The Barbecue Chicken Pizza	42768
Chicken	The California Chicken Pizza	41409.5
Classic	The Classic Deluxe Pizza	38180.5
Classic	The Hawaiian Pizza	32273.25
Classic	The Pepperoni Pizza	30161.75
Supreme	The Spicy Italian Pizza	34831.25
Supreme	The Italian Supreme Pizza	33476.75
Supreme	The Sicilian Pizza	30940.5
Veggie	The Four Cheese Pizza	32265.7
Veggie	The Mexicana Pizza	26780.75
Veggie	The Five Cheese Pizza	26066.5

THANK YOU